From: Hubbard, Jennifer
To: Bleiler, Justin
Cc: Ayodele, Ayowale
Subject: Libbey Owens Ford SI review
Date: Tuesday, February 20, 2018 11:31:13 AM
Attachments: LOF SI Soil Multichem B.xlsx

As requested, I have reviewed the above-named SI, with particular attention to human health risk assessment. The following comments are offered.

The data were validated using IM1 and M2 validation. If future decisions require more rigorous data quality (e.g., if the site should be scored for HRS), revalidation to a higher validation level may be necessary.

Section 5.6 muddies the distinction between chemicals of potential concern (COPCs) and contaminants of concern (COCs). In this case, the term COPC should actually be used, since the chemicals here did not receive a full quantitative risk assessment nor were they identified as needing remedial action objectives per the NCP.

This report was initially prepared in 2011 and thus used 2010 screening levels. In this review, I consulted the most recent screening levels, the fall 2017 RSLs. This results in some changes to the identification of COPCs. The SI screening also apparently used a Hazard Quotient of 1, when it should have used 0.1 to account for additive effects.

Sections 5.6.1, 5.6.2, 5.7: Because of the updated toxicity factors, PAHs would no longer be industrial COPCs in surface soil, and indeno[1,2,3-c,d]pyrene would no longer be an industrial COPC in subsurface soil.

Sections 5.6.3 and 5.7: Barium, nickel, vanadium and biphenyl should also be groundwater COPCs; PCE does not need to be a COPC.

Section 6.0: It is not clear why the report concludes that soil chemicals are not a significant source of contamination. The report does not perform a risk assessment beyond the screening step, so there is no demonstrated support for this statement. I performed simple default risk calculations (see attached) and found that using current defaults, worker exposures to this soil would fall within the NCP target risk ranges. However, future residential exposure to soils, especially subsurface soils, could exceed acceptable risks.

The potential residential risk drivers are arsenic, chromium, and benzo[a]pyrene. (However, the chromium risks conservatively assume hexavalent chromium, whereas the form of chromium in the soil may be the much less toxic trivalent species, and chromium might also be consistent with background, although background data were not available.) Although the site is currently used industrially, it is important to examine what controls exist to prevent unrestricted use of the site, and unacceptable risks, in the future.

The report should also note that groundwater concentrations of arsenic, TCE, BEHP, and carbon tetrachloride exceed MCLs.

Section 6.0: I agree that the extent of groundwater contamination is unknown, and that vapor intrusion should be considered.

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